CLAIMS

1. A cement kiln chlorine/sulfur bypass system comprising:

an air bleed means for bleeding a kiln exhaust gas passage, which runs from an end of a cement kiln to a bottom cyclone, of a part of a combustion gas;

a separating means for separating dust in the gas bled by the air bleed means into coarse particles and fine particles; and

a wet dust collector for collecting dust from the gas containing the fine particles separated by the separating means.

2. The cement kiln chlorine/sulfur bypass system as claimed in claim 1, wherein said separating means includes a classifier in which cut size is changeable.

3. The cement kiln chlorine/sulfur bypass system as claimed in claim 1, wherein said separating means includes a cyclone in which inlet gas velocity is changeable.

4. The cement kiln chlorine/sulfur bypass system as claimed in claim 1, wherein said wet dust collector is a mixing scrubber.

5. The cement kiln chlorine/sulfur bypass system as claimed in claim 4, wherein said mixing scrubber comprises a circulating liquid tank to which a dust slurry collected by the mixing scrubber is supplied and a circulating system by which a part of the dust slurry in the circulating liquid tank is returned to the mixing scrubber.

6. The cement kiln chlorine/sulfur bypass system as claimed in claim 5, further comprising a sulfuric acid supplier for supplying sulfuric acid to the circulating liquid tank.

7. A method of treating a combustion gas exhausted from a cement kiln comprising:

bleeding a kiln exhaust gas passage, which runs from an end of a cement kiln to a bottom cyclone, of a part of the combustion gas;

separating coarse particles in dust in the bled gas;

collecting dust from the gas containing fine particles by a wet dust collector with a

solvent.

8. The method of treating combustion gas exhausted from a cement kiln as claimed in claim 7, wherein at least a part of said dust slurry collected by the wet dust collector is added to a cement mill system.

9. The method of treating combustion gas exhausted from a cement kiln as claimed in claim 7, wherein said dust slurry collected by the wet dust collector is separated into solid, and liquid and a desalted dust cake is added to a cement mill system.

10. The method of treating combustion gas exhausted from a cement kiln as claimed in claim 7, wherein said dust slurry collected by the wet dust collector is separated into solid and liquid, and at least a part of separated brine is added to a cement mill system.

11. The method of treating combustion gas exhausted from a cement kiln as claimed in claim 7, wherein said dust slurry collected by the wet dust collector is separated into solid and liquid; separated brine is desalted in salt recovery process to recover industry salt; and treated water after desalting is utilized again as washing water for washing after the solid/liquid separation or/and water for collection at the wet dust collector.